

VERB CONJUGATION IN MODERN STANDARD GERMAN

Generative-transformational grammarians have repeatedly stated that a grammatical theory must be consistent, adequate, and simple.¹ It must also be formal, explicit, and complete.²

Its task is to explicate thoroughly the means by which semantic structures are related to phonological structures.³ Chomsky makes it clear that the criterion of adequacy has several aspects: a grammar is "descriptively adequate to the extent that it correctly describes the intrinsic competence of the idealized native speaker, ... the problem of internal justification — of explanatory adequacy — is essentially the problem of constructing a theory of language acquisition, an account of specific innate abilities that make this achievement possible."⁴

According to these statements then, a linguist is chiefly concerned with the so-called "deep structure" of a language, even though he can analyze it only through the phonological output, the "surface structure". Tacitly acknowledging this troublesome necessity, Chomsky and Halle recognize at least two levels of surface structure, one comprising strings of formatives that are syntactically motivated, the other a phonological representation arrived at through a series of readjustment rules. Thus, the lexical elements constituting features of morphology are combined or concatenated according to certain fixed principles and reflected ultimately in the process of phonation. These ideas have been summarized as follows:

... inflectional rules are essentially part of a component of grammar which — as Chomsky and Halle have recently proposed for entirely independent reasons — is to intervene between the operation of the syntactic transformations and the phonological rules, thereby mapping the surface structure of a sentence onto its systematic phonemic representation.⁵

The rules of the phonological component are ordered, and apply in sequence to a string of formatives (utilizing, when this is relevant, the associated syntactic information) until ultimately a representation is reached in terms of a universal phonetic alphabet.⁶

Although the principles of linguistic analysis thus clearly involve a morphological level and its incumbent structures, the treatment of

morphology by generative grammarians has thusfar received short shrift.⁷ One of the more comprehensive works now available is Wolfgang Wurzel's "Studien zur deutschen Lautstruktur", published in *Studia Grammatica VIII*, although several other, more restricted studies have appeared in the same monograph series. Here the phonetic resources of German are summarized in relation to their functions in various morphemes or among the allomorphs of certain morphemes. Important among these functions are the derivative qualities of umlaut, a phonological device which permeates particularly the German nominal and verbal systems. So intriguing, in fact, is this phenomenon that John Ross attempted its explication already in 1967⁸, dealing there with the German verbal system and its total inflectional resources. To be sure, these same matters had been treated thoroughly by Halle as early as 1953⁹, but the descriptive model he employed was that of traditional structural analysis (including process-grammar "derivations" from "base forms") — a method to be commended for its completeness and simplicity, but entirely inadequate in the light of the more recent theories mentioned above.

While it has been said that normative grammar is not the concern of a descriptive linguist¹⁰, it is still necessary to define the universe of discourse in order to insure that generative rules are valid in relation to the competence of some reasonable number of language speakers. In recent editions of the *Duden-Grammatik*, for example, the authors are principally concerned with the structure of the Hochsprache, "die oberste, als Ideal angestrebte Schicht der Gemeinsprache"¹¹ — a norm formerly prescribed but now described. Nevertheless, the descriptions that follow are sometimes expressed in terms of major or minor alternatives, so that a prescriptive inference can be drawn from a reported frequency of use.

Most of the published analyses of the German verb-system, therefore, seem to accept this type of data-selection, and the resulting formulations of rules permit no alternatives at all. Thus, Bechert and his coauthors say: "Die hier vorgeführte Analyse geht von einem Standard aus, in dem *du reißt, reizt, reist* (nicht *reißest, reizest, reiest*) und im Präteritum *du ließt, last, botst* (nicht *ließest, lasest, botest*) gesprochen wird."¹² Others make an arbitrary choice between *ändere/ändre, sammele/sammle*, or *du wäschst/wäscht*. Obviously, such decisions will

greatly facilitate adherence to criteria of adequacy and simplicity.¹³ On the other hand, structures are seldom *s e l e c t e d* solely for the justification of analysis; it would be simpler, for example, to have a single phonological rule describing the inflections of *findest* and **fandest*, rather than the required combination of phonological and morphological rules needed to describe those of *findest* and *fandst*.

Traditionally, and also in generative grammar, German verbs are designated as *w e a k* and *s t r o n g*. Weak verbs are those whose preterite and perfect participle forms employ the suffix /et/t/ (*arbeiten*, *lieben*, etc.). Strong verbs always have vocalic alternation for past tense, and their perfect participle suffix is /en/n/ (*sehen*, *tun*, etc.).¹⁴ In an incomplete analysis of the German verb system, Bechert et al. (designating simple weak verbs as V₁ and strong verbs as V₂) formulate rules for generating the inflectional endings of verbs such as *arbeiten*, *lieben*, *singen*, and *finden*, but they fail to consider either the irregular weak verbs or those corresponding in type to *atmen*, *ändern*, *sammeln*, *halten*, *laden*, *beißen*, or *waschen*.¹⁵

In the surface structure of standard German there are three sets of verbal inflections, each with phonologically determined allomorphs. The sets are employed according to syntactic criteria:

I. Forms:

Uses:

	singular	plural	
1. person	e	en/n	present tense of all verbs except <i>sein</i> and the modals.
2. person	est/st/t	et/t	
3. person	et/t/∅	en/n	

II.

1. person	∅	en	past tense of strong verbs and present tense of modals.
2. person	st/t	et/t	
3. person	∅	en	

III. Forms:

Uses:

	singular	plural
1. person	e	en
2. person	est	et
3. person	e	en

past tense of weak verbs and of *werden*; subjunctive of all verbs except *sein*.

Set I: The 2nd pers. sing. has /est/ if (1) the verb stem ends in /m/n/ preceded by any consonant except /l/ or /r/, or (2) if it ends in /d/t/ and the stem vowel is the same as that of the infinitive, or /t/ if the stem ends in /s/; otherwise it has /st/. The 3rd pers. sing. has /et/ if the above conditions (1) or (2) prevail, and /t/ if the stem vowel is unchanged, but if the stem vowel changes the ending is \emptyset . The 2nd pers. pl. has /et/ under the above conditions (1) or (2); otherwise it has /t/. The 1st and 2nd pers. pl. have /n/ if the stem ends in unstressed /el/ or /er/, otherwise they have /en/.¹⁶ (Examples: *atmen, arbeiten, lieben, laden, sammeln, ändern*.)

Set II: The 2nd pers. sing. has /t/ if the stem ends in /s/; otherwise it has /st/. The 2nd pers. pl. has /et/ if the stem ends in /d/t/; otherwise it has /t/.

In Set I the inflectional allomorph for the 3rd pers. sing. pres. indic. of *halten* and *laden* presents some difficulty in analysis: a form /le:d+ \emptyset / can be posited in the surface structure with the knowledge that /d/ is realized as /t/ before \emptyset . A deeper perspective, however, permits us to assume underlying forms */le:d+t/ or */helt+t/ and a phonological readjustment rule according to which */dt/ or */tt/ are realized as /t/. The same conditions hold, moreover, in the preterite forms of *senden* and *wenden*. There, rather than positing a doubly irregular set of allomorphs (/zan/ and /van/¹⁷), we may assume that the underlying forms are */zand+t/ and */vand+t/. The selection of /et/ or /t/ as a preterite or perfect participle marker for weak verbs then follows the same rule as for that of /et/ or /t/ in the 3rd pers. sing. pres. indic. The specialized preterites *sendete* and *wendete*, as well as the preterite subjunctive forms of the same, have /et/ by regular rule, while *sandte* and *wandte* have only */t/ in the underlying forms (i.e., */-d+t/) where */dt/ → /t/.¹⁸

In the contextual rules required for selection of alternants /est/st/t/ in the 2nd pers. sing. and /et/t/Ø/ in the 3rd pers. sing., it is customary to posit base forms /st/ and /t/, respectively, with an insertion rule for /est/ and /et/, and a deletion rule for 2nd pers. /t/. The subjunctive endings are sometimes said to be characterized by the marker /e/, which is placed before the personal endings. If, as Wurzel has suggested, the subjunctive and indicative endings are generated by *e*-epenthesis, *e*-deletion, and the simplification of geminate *e-e*¹⁹, neither simplicity nor adequacy is thus achieved, and the 3rd pers. sing. pres. indic. and subj. forms still differ (i.e., /et/ vs. /e/). Subjunctive inflections for all verbs may, however, be generated from Set III above. Incumbent rules for stem vowel alternation in strong verbs and irregular weak verbs have been adequately explicated by Ross and thus need not be illustrated here (the irregular form *sei* can be derived, by a special deletion rule, from */sei+e/).

For the purpose of formulating phrase-structure and transformational rules, we may symbolize the verbs according to inflectional types, e.g., V_1 = weak verbs, V_2 = strong verbs; $V_{.x}$ = verbs with stems ending in /s/ (*heißen*, *reisen*, *reizen*, etc.); $V_{.y}$ = verbs with stems ending in /m/ or /n/ preceded by any consonant except /l/ or /r/; $V_{.a}$ = verbs ending in /d/t/ and having no vowel alternation in the present stems (*reden*, *bitten*, etc.); $V_{.b}$ = verbs ending in /d/t/ and having vowel alternation in the present stem (*laden*, *halten*, *fechten*, etc.). The rules would then be ordered as follows: (1) present indicative, (a) personal inflections; (2) preterite indicative, (a) personal inflections; (3) present subjunctive, (a) personal inflections; (4) past subjunctive, (a) personal inflections; (5) perfect participle, (a) inflections. Steps (2) and (4) set up transformational equivalents for V_1 and V_2 , in which suffixes /et/t/ or /Ø/ are applied to the stem, while stem vowel mutation is generated occasionally for V_1 , but always for V_2 . Inflections representing morphological features²⁰ may then be applied in sets, with underlying stages as indicated above.

In the determination of allomorphs by contextual rules, it is important, from the standpoint of simplicity as well as adequacy, that maximum structural generalization be preserved. Thus, stem endings /d/t/ might be characterized as [+anterior, +coronal, -nasal, -continuant] or simply [+dental, +stop]; all other features are redundant. These then require

e-insertion in appropriate inflections or, as the case may be, in the past tense and perfect participle markers /et/. Stems ending in a nasal preceded by a consonant (thus, /m/ or /n/, since /ŋ/ can only follow a vowel) also require such *e*-insertion if the preceding consonant is n o t [+anterior, +coronal, +continuant, -obstruant] or [+liquid]²¹; other features are redundant. That is to say: the structure of German provides rules for existing, as well as for potential verbs, for *ebnen*, *widmen*, *regnen*, *wappnen*, *atmen*, *trocknen*, *bewaffnen*, *rechnen*, and also the possible verbs **gleißnen*, **gleisnen*, **rauschnen*, **tropfnen*, **trutznen*, **hymnen*, etc. Duden gives the rule quite simply as "... auf ausgesprochenen Konsonant + m, n"; here the word *ausgesprochen* compensates for the ambiguities found in the written word, but the rule fails to make exceptions for /l/ and /r/.²² Wahrig generalizes with the phrase "Verschlußlaut oder Reiblaut und Nasal"²³, but excludes the possibility of successive nasals.

Rules for 2nd pers. sing. pres. indic. /t/ apply to stems with sibilate endings (/s/ts/). Rules for 1st and 3rd pers. pl. pres. indic. /n/ apply when the stem ends in unstressed /el/ or /er/, as stated above, or in the verb *tun*.

Maximum generalization, therefore, aims for the specification of grammaticalness — a matter of competence — while the actualization of rules thus derived is limited in the area of performance — a matter of acceptability.²⁴ In pedagogical grammars, for both native and non-native speakers of German, the ability to pronounce is frequently taken as a governing criterion. While non-native speakers normally encounter a great deal of difficulty in pronunciation anyway at the beginning, they may well puzzle over the required *e*-insertion in *redest*, while words like *hältst* and *findst* are passed over lightly. Yet the so-called redundancy rules²⁵ do provide certain phonological limits for native speakers, limits which, in the course of history, may tend to dissipate. Thus, even the native speaker has difficulty with /du:/e:r zoɪfst/ and /du:/e:ʃst/, the pronunciations recommended by Duden, and by negative performance, creates new readjustment rules. Achievement of an adequate description, therefore, in both scientific and pedagogical grammars, requires completeness before simplicity, and completeness means accounting for the generative history of total performance.

Footnotes

- 1 Anon., *Studia Grammatica I*, p. 9.
- 2 Bach, *An Introduction to Transformational Grammars*, p. 10.
- 3 Bechert et al., *Einführung in die generative Transformationsgrammatik*, p. 22.
- 4 Chomsky, *Aspects of the Theory of Syntax*, p. 24 and p. 27.
- 5 Bierwisch, *Syntactic Features in Morphology: General Problems of So-Called Pronominal Inflections in German*, p. 241.
- 6 Chomsky, *Current Issues in Linguistic Theory*, p. 85. An important difference is to be noted here in the terms *s y s t e m a t i c p h o n e m i c r e p r e s e n t a t i o n* and *u n i v e r s a l p h o n e t i c a l p h a b e t*; only the first of these is significant for linguistic output and its subsequent interpretation. Very few speakers of a language communicate with one another by means of a universal phonetic alphabet. Most of them do so by means of significant sound-features which they produce in the course of phonation or through a (secondary) graphemic representation of the same.
- 7 Bechert et al., *Einführung*, p. 137.
- 8 Ross, *Der Ablaut bei den deutschen starken Verben*.
- 9 Halle, *The German Conjugation*.
- 10 *Linguistik I*, p. 104.
- 11 *Duden 4*, p. 25.
- 12 Bechert et al., p. 139.
- 13 *Linguistik I*, p. 104.
- 14 Ross, *Der Ablaut*, p. 76-77; Wurzel, *Studien zur deutschen Lautstruktur*, pp. 65-66.
- 15 Bechert et al., *Einführung*, pp. 137-145.
- 16 The verb *tun* is a single exception.
- 17 Halle, *The German Conjugation*, p. 49.
- 18 The verb *werden*, with its irregular preterite singular forms, causes no problem, since this is a strong verb and, therefore, lacks the past tense marker /et/t/.
- 19 Wurzel, *Studien*, p. 67.

- 20 Wurzel, Studien, p. 68.
- 21 Alternative features are given to illustrate the possible economy of traditional feature assignments.
- 22 Duden 4, § 1125.
- 23 Wahrig, Deutsches Wörterbuch, p. 152.
- 24 Chomsky, Aspects of the Theory of Syntax, p. 11.
- 25 Bierwisch, Skizze der generativen Phonologie, p. 22 et passim.

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